Manufactured by

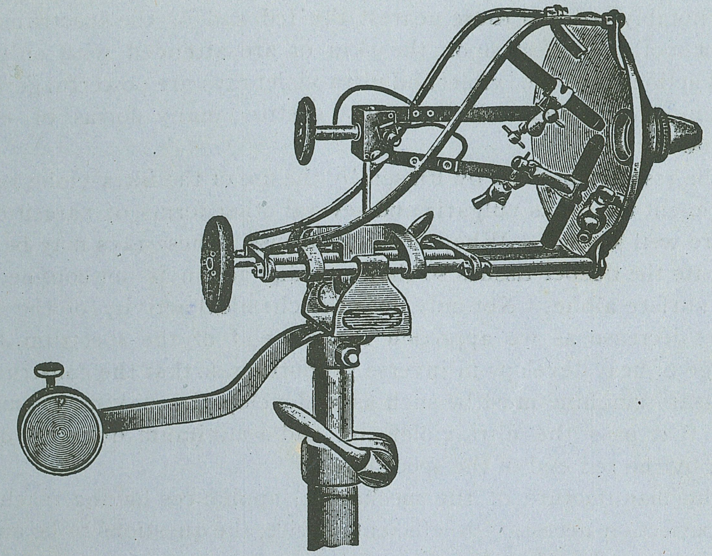
SHUTTS, WALTERS & CO.,

Surgeons' Instruments, Hospital and Laboratory Supplies

534-536 Sutter St. San Francisco, Cal.

PHOTO-THERAPY

The Surgery of Light



The Finsen Light as modified for use in the London Hospital

THE GENUINE

FINSEN'S LIGHT

Within the Reach of All

The Surgery of Light

The patient investigation and resultant discoveries of Finsen are too fresh in memory to require restatement. That light is a healthful stimulant is conceded by all. That it is not only a powerful agent for good but a positive germicide is also well established. Aside from its therapeutic power, it is without harmless effects, even in cases in which no benefit is seemingly obtained.

Finsen has demonstrated beyond controversy that while certain rays of light, notably red and those nearest the red end of the spectrum, either produce a soothing effect upon the skin or are attended with only slight chemical action, the blue, violet and ultra-violet rays are powerful germicides and when concentrated will instantly destroy many forms of exposed pathogenic bacteria.

The results obtained by Finsen by the use of the ultra-violet rays as a curative agent for lupus vulgaris and several other forms of parasitical skin lesions are well known. When strongly focused, these rays may be caused to penetrate the deeper tissues so that remedial action is not confined to the external surface alone. Not only does the chemical activity of the various ray colors decrease as we approach the red end of the spectrum, but the percentage of heat develops in inverse proportion, so that the construction of the necessary machine must be such as to develop the maximum amount of the rays that pass the ultra-violet end and a minimum quantity of those admitted by the red end of the spectrum.

The manufacture of the mechanical appliances having reached that state of perfection necessary to efficient service, the questions to be answered are, Can it be employed in the office of the average practitioner and can it be secured at a moderate price? In order that a malady may be treated successfully with the aid of light, the latter must be strongly concentrated and cooled. In the construction of the required apparatus, it is not only necessary to secure a powerful light but to properly focus it through a certain form of lense. The object of these lenses is to gather the divergent rays of the electric arc-lamp and project them parallel. Experiments have proven that a large percentage of the ultra-violet rays of natural sunlight are lost in passing through the atmosphere, and that to obtain these rays in their proper proportion, it is necessary to generate them by powerful electric lights. It is a well known mechanical principle that while ordinary glass arrests a large percentage of the ultra-violet rays, rock crystal allows them to pass freely so that in the proper construction of an apparatus, it is necessary that the lenses be ground from perfectly transparent quartz crystal, or as it is often called, "pebble" stone. By using two of these "pebble" lenses, so as to include a water space between them, violet colored water may be admitted to the chamber so that color rays other than violet may be arrested. While this feature has been deemed necessary, Finsen has shown that good results may be obtained from a powerful light focused through quartz lenses if the space between the lenses be filled with uncolored distilled water. As this allows the free passage of all of the chemical rays, the germicidal action of the violet-rays may be secured even if mixed with those of other colors.

Much time and money have been spent in research on our part to secure a form of lamp available for the use of physicians and hospitals alike. The pattern selected and here illustrated is the one designed by Finsen as employed for the use of the London Hospital (sometimes known as the "London Hospital Lupus Lamp"). It comprises a powerful arc light that may be placed directly in either a 104 volt alternating or 110 volt continuous current. As it is constructed with a rheostat, no additional apparatus is necessary for its employment. The face of the machine comprises a circular hollow chamber in funnel form, so arranged that the center is formed with two rock crystal lenses with a water space between them. By means of a reservoir and suitable tubing a constant flow of water, either plain or violet colored, may be passed through the water space. It is necessary that a stream of water should be maintained while light is being generated, not only for its cooling effect but to avoid over-heating of the lenses. By a special screw device the relation of the light to the lenses may be adjusted at all times and a proper focus secured. A second screw de proper feed for the arc light, that the distance between the two carbons may be increased or decreased as desired.

Monell has long held that the demands of the American practitioners and the equipment of their offices require the employment of a lamp of not to exceed 10 amperes capacity. This is exactly what we offer in the apparatus here presented. The machine as now manufactured by us is of elegant workmanship, beautifully polished and nickel-plated, and comprises an ideal outfit in every particular. This lamp is not only extremely rich in ultra-violet rays but it throws off a limited amount of heat and radiates but little light. It not only forms a powerful germicide, but reduces the time of exposure to a minimum. The low price at which it is offered places it within the reach of every hospital and practitioner.

The wonderful possibilities of this method of treatment should attract the attention of every practitioner of medicine. We believe the system has long passed the experimental stage and that its universal employment is rapidly approaching. In ordering state the form of current with which a lamp must be operated.

Price net $100.00. Delivered to any railroad station in the United States or Canada west of the Rocky Mountains.